PHYSICS IN MOTION
gpb.org/physics-motion

Unit 2B
Speed and Velocity
The Constant Velocity Car Lab

Name:

Date:

A toy company has produced a car that they claim moves at a constant velocity; meaning, it covers the same amount of distance for every time interval that it moves. As a consumer protection agent, it is your responsibility to provide evidence supporting this claim.

You will be provided with the following materials in order to determine if this claim is true or if there is at least a relationship between the distance a car travels and a given amount of trip time.

Materials:

- car
- meter stick
- timer
- butcher paper
- graph paper

You and your group will need to devise an experiment that tests the claim made by the toy company. You must conduct your experiment, collect and organize your data in a labeled table, then graph the data (plotting position on the y-axis and time on the x-axis).

Time (s)	Position (m)

questions continued on next page

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Questions to consider:

1. Is there a linear relationship between position and time?

2. If there is a linear relationship, calculate the slope of the line of best fit.

3. According to the units of measurement, what does your slope represent?

4. If the entire graph is not linear, is there a portion that shows a linear relationship?

5. Is the company's claim about its constant velocity car correct? Give evidence from your experiment that either supports or refutes the claim.